at1110paper_practice_test (v45)

1. Expand the following expression into standard form.

$$(9x + 8)(6x - 5)$$

$$54x^2 - 45x + 48x - 40$$
$$54x^2 + 3x - 40$$

2. Solve the equation.
$$(8x + 5)(9x + 4) = 0$$

$$x = \frac{-5}{8} \qquad x = \frac{-4}{9}$$

3. Expand the following expression into standard form.

$$(9x + 2)(9x - 2)$$

$$81x^2 - 18x + 18x - 4$$
$$81x^2 - 4$$

4. Expand the following expression into standard form.

$$(3x - 4)^2$$

$$9x^2 - 12x - 12x + 16$$
$$9x^2 - 24x + 16$$

5. Factor the expression.
$$x^2 - 9x + 14$$

$$(x-7)(x-2)$$

6. Factor the expression.
$$25x^2 - 49$$

$$(5x-7)(5x+7)$$

7. Solve the equation with factoring by grouping.
$$8x^2 - 12x - 10x + 15 \; = \; 0$$

$$(4x-5)(2x-3) = 0$$
$$x = \frac{5}{4} \qquad x = \frac{3}{2}$$

8. Solve the equation.
$$6x^2 - 20x + 7 \; = \; 3x^2 - 4x + 2$$

$$3x^2 - 16x + 5 = 0$$
$$(3x-1)(x-5) = 0$$
$$x = \frac{1}{3} \qquad x = 5$$